

Exhibit No.\_\_\_\_(SCH-16)  
Docket UE-130043  
Witness: Samuel C. Hadaway

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION,

Complainant,

v.

PACIFICORP d/b/a  
Pacific Power & Light Company

Respondent.

Docket UE-130043

**PACIFICORP**

**EXHIBIT OF SAMUEL C. HADAWAY**

**Risk Premium Analysis**

**August 2, 2013**

## PacifiCorp

### Risk Premium Analysis-Electric

(Based on Projected Interest Rates)

	MOODY'S AVERAGE PUBLIC UTILITY BOND YIELD (1)	AUTHORIZED ELECTRIC RETURNS (2)	INDICATED RISK PREMIUM
1980	13.15%	14.23%	1.08%
1981	15.62%	15.22%	-0.40%
1982	15.33%	15.78%	0.45%
1983	13.31%	15.36%	2.05%
1984	14.03%	15.32%	1.29%
1985	12.29%	15.20%	2.91%
1986	9.46%	13.93%	4.47%
1987	9.98%	12.99%	3.01%
1988	10.45%	12.79%	2.34%
1989	9.66%	12.97%	3.31%
1990	9.76%	12.70%	2.94%
1991	9.21%	12.55%	3.34%
1992	8.57%	12.09%	3.52%
1993	7.56%	11.41%	3.85%
1994	8.30%	11.34%	3.04%
1995	7.91%	11.55%	3.64%
1996	7.74%	11.39%	3.65%
1997	7.63%	11.40%	3.77%
1998	7.00%	11.66%	4.66%
1999	7.55%	10.77%	3.22%
2000	8.14%	11.43%	3.29%
2001	7.72%	11.09%	3.37%
2002	7.53%	11.16%	3.63%
2003	6.61%	10.97%	4.36%
2004	6.20%	10.75%	4.55%
2005	5.67%	10.54%	4.87%
2006	6.08%	10.36%	4.28%
2007	6.11%	10.36%	4.25%
2008	6.65%	10.46%	3.81%
2009	6.28%	10.48%	4.20%
2010	5.55%	10.34%	4.79%
2011	5.13%	10.29%	5.16%
2012	4.27%	10.17%	5.90%
AVERAGE	8.68%	12.09%	3.41%

#### **INDICATED COST OF EQUITY**

PROJECTED SINGLE-A UTILITY BOND YIELD*	4.97%
MOODY'S AVG ANNUAL YIELD DURING STUDY	8.68%
INTEREST RATE DIFFERENCE	<u>-3.71%</u>

INTEREST RATE CHANGE COEFFICIENT	<u>-42.81%</u>
ADJUSTMENT TO AVG RISK PREMIUM	1.59%

BASIC RISK PREMIUM	3.41%
INTEREST RATE ADJUSTMENT	<u>1.59%</u>
EQUITY RISK PREMIUM	<u>5.00%</u>

PROJECTED SINGLE-A UTILITY BOND YIELD*	<u>4.97%</u>
<b>INDICATED EQUITY RETURN</b>	<b><u>9.97%</u></b>

(1) Moody's Investors Service

(2) Regulatory Focus, Regulatory Research Associates, Inc.

\*Projected single-A bond yield is 109 basis points over projected long-term Treasury bond rate of 3.88%.

The single-A spread is for 3 months ended June 2013 from Exhibit No.\_\_\_\_(SCH-12), p. 1.

The projected Treasury bond rate is the 30 year rate at 12/31/2014 from Exhibit No.\_\_\_\_(SCH-12), p. 3.

## PacifiCorp

### Risk Premium Analysis-Electric

(Based on Current 3-Month Average Interest Rates)

	MOODY'S AVERAGE PUBLIC UTILITY BOND YIELD (1)	AUTHORIZED ELECTRIC RETURNS (2)	INDICATED RISK PREMIUM
1980	13.15%	14.23%	1.08%
1981	15.62%	15.22%	-0.40%
1982	15.33%	15.78%	0.45%
1983	13.31%	15.36%	2.05%
1984	14.03%	15.32%	1.29%
1985	12.29%	15.20%	2.91%
1986	9.46%	13.93%	4.47%
1987	9.98%	12.99%	3.01%
1988	10.45%	12.79%	2.34%
1989	9.66%	12.97%	3.31%
1990	9.76%	12.70%	2.94%
1991	9.21%	12.55%	3.34%
1992	8.57%	12.09%	3.52%
1993	7.56%	11.41%	3.85%
1994	8.30%	11.34%	3.04%
1995	7.91%	11.55%	3.64%
1996	7.74%	11.39%	3.65%
1997	7.63%	11.40%	3.77%
1998	7.00%	11.66%	4.66%
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AVERAGE	8.68%	12.09%	3.41%

#### **INDICATED COST OF EQUITY**

CURRENT SINGLE-A UTILITY BOND YIELD*	4.23%
MOODY'S AVG ANNUAL YIELD DURING STUDY	8.68%
INTEREST RATE DIFFERENCE	<u>-4.45%</u>

INTEREST RATE CHANGE COEFFICIENT	<u>-42.81%</u>
ADJUSTMENT TO AVG RISK PREMIUM	1.91%

BASIC RISK PREMIUM	3.41%
INTEREST RATE ADJUSTMENT	<u>1.91%</u>
EQUITY RISK PREMIUM	<u>5.32%</u>

CURRENT SINGLE-A UTILITY BOND YIELD*	<u>4.23%</u>
<b>INDICATED EQUITY RETURN</b>	<b><u>9.55%</u></b>

(1) Moody's Investors Service

(2) Regulatory Focus, Regulatory Research Associates, Inc.

\*Current single-A utility bond yield is three month average of Moody's Single-A Public Utility Bond Yield Average through June 2013 from Exhibit No.\_\_\_\_(SCH-12), p. 1.

## PacifiCorp

### Risk Premium Analysis-Electric (Based on Current Spot Interest Rates)

	MOODY'S AVERAGE PUBLIC UTILITY BOND YIELD (1)	AUTHORIZED ELECTRIC RETURNS (2)	INDICATED RISK PREMIUM
1980	13.15%	14.23%	1.08%
1981	15.62%	15.22%	-0.40%
1982	15.33%	15.78%	0.45%
1983	13.31%	15.36%	2.05%
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1996	7.74%	11.39%	3.65%
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AVERAGE	8.68%	12.09%	3.41%

#### **INDICATED COST OF EQUITY**

CURRENT SINGLE-A UTILITY BOND YIELD*	4.76%
MOODY'S AVG ANNUAL YIELD DURING STUDY	8.68%
INTEREST RATE DIFFERENCE	-3.92%

INTEREST RATE CHANGE COEFFICIENT	-42.81%
ADJUSTMENT TO AVG RISK PREMIUM	1.68%

BASIC RISK PREMIUM	3.41%
INTEREST RATE ADJUSTMENT	1.68%
EQUITY RISK PREMIUM	5.09%

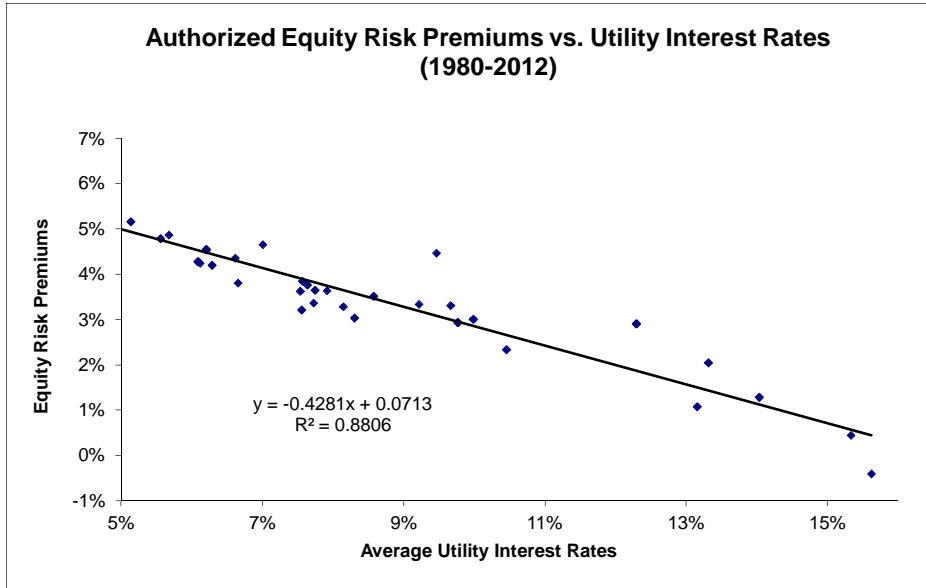
CURRENT SINGLE-A UTILITY BOND YIELD*	4.76%
<b>INDICATED EQUITY RETURN</b>	<b>9.85%</b>

(1) Moody's Investors Service

(2) Regulatory Focus, Regulatory Research Associates, Inc.

\*Current single-A utility bond yield is Moody's Single-A Public Utility Bond Yield at July 12, 2013 from Exhibit No.\_\_\_\_(SCH-12), p. 2.

**PacifiCorp**  
Risk Premium Analysis-Electric  
Regression Analysis & Interest Rate Change Coefficient



SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.938398087
R Square	0.88059097
Adjusted R Square	0.876739066
Standard Error	0.00472491
Observations	33

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.005103707	0.005103707	228.6118562	7.45897E-16
Residual	31	0.000692068	2.23248E-05		
Total	32	0.005795775			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0.07127957	0.002591562	27.50448302	2.42768E-23	0.065994045	0.076565095	0.065994045	0.076565095
X Variable 1	-0.428076736	0.028312111	-15.11991588	7.45897E-16	-0.485819666	-0.370333805	-0.485819666	-0.370333805